

Applicant: Moore Jr. et al.
Application No. 09/752,570

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) An arrangement for providing a communication interface between a hybrid fiber coaxial (HFC) network and an in-home communications network, the arrangement comprising:

a home networking gateway disposed to communicate with the HFC network and couple communications to the in-home network, the home networking gateway including a translator for mapping between HFC-based communication protocols and in-home network-based protocols, said home networking gateway for performing device discovery and network management of said in-home network;

a device database coupled to said home networking gateway and comprising configuration files associated with various in-home telecommunication devices; and

a service level agreement database coupled to said home networking gateway and comprising a listing of authorized services for the in-home network, class of service information and quality of service information.

2. (Original) The arrangement as defined in claim 1 wherein the home networking gateway comprises:

a home network interface connection module for supporting a pre-defined in-home communication protocol;

a voice telephony service connection module, coupled to the home network interface connection module, for providing communication with in-home telephony devices;

a data service connection module for providing communication with in-home data-based devices;

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a cable modem connection module for providing communication with the HFC network;

a communication bus coupled to each of the voice telephone service connection module, the data service connection module and the cable modem connection module for enabling communication between each module; and

a translation processor coupled to the communication bus for mapping between communication protocols used by the HFC network and protocols used by the in-home network and providing translated protocols with each transaction.

3. (Original) The arrangement as defined in claim 2 wherein the voice telephony service connection module comprises a subscriber line interface circuit (SLIC) connection.

4. (Original) The arrangement as defined in claim 2 wherein the data service connection module comprises an Ethernet connection.

5. (Original) The arrangement as defined in claim 2 wherein the in-home network protocol is a wireless service protocol.

6. (Original) The arrangement as defined in claim 5 wherein the wireless protocol comprises the Shared Wireless Access Protocol (SWAP).

7. (Original) The arrangement as defined in claim 2 wherein the in-home network protocol comprises the Home Phoneline Network Alliance (HomePNA) protocol.

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8. (Original) The arrangement as defined in claim 2 wherein the in-home network protocol comprises the IEEE 1394 FireWire protocol.

9. (Original) The arrangement as defined in claim 2 wherein the home networking gateway further comprises an internal battery power supply.

10. (Currently amended) The arrangement as defined by claim 2 wherein the home networking gateway further comprises a digital signal processor (DSP) coupled between the voice connection module and the ~~[[in-]]~~home network interface module to distributed voice signals from said voice communication module into the in-home network through said ~~[[in-]]~~home network interface module.

11. (Currently amended) A method of providing network management for an in-home network of communication devices coupled to an external HFC network through a home networking gateway ~~interface~~, the method comprising the steps of:

performing, using the home networking gateway, a device discovery process to determine the plurality of devices and services existing in the in-home network;
~~[[and]]~~

reporting the discovered information to an inventory management system;
recognizing at the home networking gateway a service request from an in-home network device;

obtaining authorization for said service from a network management system;
upon authorization, requesting said service from a call management system;
and

providing said service to the in-home device.

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12. (cancelled)

13. (Original) The method of claim 11 wherein the method is further utilized for bandwidth allocation and comprises the additional steps of

- recognizing at the home networking gateway a device request for bandwidth;
- obtaining authorization bandwidth from a network management system;
- upon authorization, requesting bandwidth from a cable modem termination system (CMTS);
- allocating the requested bandwidth on the HFC network; and
- allocating, through the home networking gateway, the requested bandwidth on the in-home network to the requesting device.

14. (New) A home networking gateway disposed as a communication interface between a hybrid fiber coaxial (HFC) network and an in-home network having customer premise equipment (CPE) devices, the home networking gateway comprising:

- a home network interface connection module for supporting a pre-defined in-home communication protocol;

- a voice telephony service connection module, coupled to the home network interface connection module, for providing communication with telephone-based CPE devices;

- a data service connection module for providing communication with data-based CPE devices;

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a cable modem connection module for providing communication with the HFC network;

a communication bus coupled to each of the voice telephone service connection module, the data service connection module and the cable modem connection module for enabling communication between each module; and

a translation processor coupled to the communication bus for mapping between communication protocols used by the HFC network and protocols used by the in-home network and providing translated protocols with each transaction

15. (New) The home networking gateway of claim 14, having network management functionality, further comprising:

a device database coupled to said home networking gateway, comprising configuration files associated with said CPE devices, whereby device discovery protocols of the in-home network are used by the home networking gateway to discover CPE devices present in the in-home network; and

a service level agreement database coupled to said home networking gateway, comprising a listing of authorized services for the in-home network, class of service information and quality of service information, whereby network resources and delivery of services to the in-home network are managed by the home networking gateway according to the listing of authorized services.